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## MEMORANDUM

To: Files

From: Environmental Contaminant Specialist

Subject: Silver Reef (Leeds, Utah) Mine Reclamation Site

DIVISION OF  
OIL GAS & MINING

An opportunistic field review was conducted of the Silver Reef site northwest of Leeds, Utah, on February 10, 1993 by Carol Wiens and myself (Bruce Waddell). The exact location of the site is shown as Attachment 1.

The entire site was not walked, however, what appeared to be the main processing area was examined. The site was visited at a time when snowmelt and recent rains had saturated the surface soils and some surface runoff was occurring. Access was gained by road to the upper end of the facility about 1/3 mile above the remaining leach pads. Further travel by vehicle was prevented by the unstable roads.

Surface movement of contaminants offsite from this site appears likely. Some ore material was apparent on one of the leach pads. We could not tell what has been done with most of the original mined material. However, trace metals in any spillage, or material that had been exposed for roads and facilities, or left from reclamation was likely being carried by surface and subsurface moisture down-drainage. The site itself was still an armpit of an operation. Old equipment, piping, and ponds were still present. Signs warn of open shafts although we did not investigate. At least 2 ponds were observed that were permanent lined ponds residual from the operation and 2 others that are not usually likely to contain water were at least temporarily holding water. An estimated 1 cfs of water was in the drainage below these ponds.

The chemical composition of the water in these surface waters is not known and was not sampled during this trip. The odor of selenium gas was believed to have been smelled near the northern end of the leach pads. On exposed soils especially near road cuts, prince's plume, a selenium loving plant, was common. Two persons on horseback were encountered. They were concerned about the high levels of uranium radioactivity in their water supply and indicated they were going to express these concerns to Utah Division of Oil, Gas and Mining.

A concern exists that any downstream ponds could be contaminated with trace metals if they are being filled by runoff from this site. Quail Creek Reservoir lies only a short distance downstream. This reservoir could end up being a sink for these metals if no other reservoirs or wetlands significant enough to short stop runoff exist before it reaches Quail Creek Reservoir. If small reservoirs, or wetlands with surface water exist, these could be becoming contaminated.

A need exists to determine what monitoring is occurring at, or downstream from this site for metals. If monitoring is not ongoing, a need exists to

determine potential deposition sites on and downstream from the Silver Reef site, and to conduct a reconnaissance level survey if trust resources are potentially affected.

